TITLE 83: PUBLIC UTILITIES
CHAPTER I: ILLINOIS COMMERCE COMMISSION
SUBCHAPTER C: ELECTRIC UTILITIES

PART XXX
INTERCONNECTION OF DISTRIBUTED GENERATION EQUIPMENT
TO ELECTRIC UTILITY DISTRIBUTION SYSTEMS

AUTHORITY: Implementing Section 9-241 and authorized by Section 10-101 of the Public Utilities Act [220 ILCS 5/9-241 and 10-101].

SOURCE: Adopted at ___ Ill. Reg. _____, effective _____.

Section XXX.010 Definitions

Affected Systems – means any electric system that is either directly or indirectly connected to the interconnection provider's electric system that could be adversely affected by the interconnection and parallel operation of the interconnection customer's distributed generation equipment.

Agreement –an interconnection and parallel operation agreement for distributed generation equipment by and between the interconnection provider and the interconnection customer.

Automatic Disconnect Device – an electronic or mechanical switch used to isolate a circuit or piece of equipment from a source of power without the need for human intervention.

Delivery Service - the services the interconnection provider may provide to deliver capacity or energy generated by interconnection customer to a buyer or delivery point.

Disconnect (verb) - to isolate a circuit or distributed generation equipment from a source of power. If isolation is accomplished with a solid-state device, "disconnect" shall mean to cease the transfer of power.

Disconnect Switch – a mechanical device used for isolating a circuit or distributed generation equipment from a source of power which device provides a visible break between the two circuits or sources.

Distributed Generation Equipment - includes any on-site small resources, distributed generation facilities, self-generators, small electric generation facilities and electric customer-generators.

Facilities Study – a study, executed in accordance with Section XXX.120, which determines specific changes to the high voltage transmission or electric distribution system(s) necessary to interconnect distributed generation equipment, and to determine, with accuracy, the cost of those changes. The facilities study may also include suggested changes to the Interconnection customer's proposed distributed generation equipment if the interconnection customer believes such changes would reduce interconnection costs.

MidAmerican suggests the Commission consider having a combined Feasibility/Impact/Facilities Study for situations in which the proposed generation will not be operated in continuous parallel (more than 100 milliseconds) with the utility system or will be operated in continuous parallel but has a design capacity of no more than 500 kW. MidAmerican's experience has been that it is usually more efficient to combine the various study efforts for these types of DG installations into one study.

Feasibility/Impact Study - a study, executed in accordance with Section XXX.110, which identifies the effect(s) of interconnecting the small resource to the high voltage transmission or electric distribution system, including identification of potential violations and the effect the interconnection would have on system reliability. The feasibility/impact study also estimates the magnitude of costs associated with facilities and/or system modifications necessary for completing the interconnection.

FERC – means the Federal Energy Regulatory Commission

IEEE – means Institute of Electrical and Electronics Engineers, Inc., a non-profit technical professional organization responsible with members in 150 countries,

responsible for technical publishing, conferences, and consensus-based standards activities.

Interconnection Customer – means any entity proposing to interconnect distributed generation resources to an interconnection provider's system or any entity that has entered into a valid interconnection agreement with an interconnection provider.

Interconnection Provider – means an electric utility as defined by the Illinois Public Utilities Act.

Islanding – a condition in which a portion of the interconnection provider's system that contains both load and a small resource is isolated from the remainder of the interconnection customer's system.

Point of Common Coupling (PCC) - The physical connection point at which the interconnection between the interconnection provider's system and the interconnection customer's distributed generation equipment interface occurs. Typically, this is the customer side of the interconnection customer's meter. MidAmerican notes that there could be more than one point of common coupling, especially if the customer has service from two different feeders. MidAmerican also points out there is a difference between the physical point of interconnection and the electrical point of interconnection. A customer with several generators where each generator has its own output breaker has several points to which electrical parallel can be made to the utility system. Each of these points must have the proper synchronizing equipment.

Primary Screening Criteria – the criteria listed in Section XXX.070.

Radial Feeder - a distribution line that branches out from a substation and is normally not connected to another substation or another circuit sharing the common supply of electric power.

Secondary Screening Criteria – the criteria listed in Section XXX.080

Short Circuit Contribution – the result of dividing the maximum short circuit contribution of the small resources(s) by the short circuit contribution available from the Company system without the small resource(s), converted to a percentage.

Small Resource - includes any on-site small resources such as distributed generation facilities, self-generators, small electric generation facilities and electric customer-generators (see also "Distributed Generation Equipment")

UL –Underwriters Laboratory, Inc., an independent, not-for-profit product safety testing and certification organization operating in Canada, Europe, Asia, Latin America, and the U.S.A.

Utility Grade Relay - a relay that is constructed to comply with, as a minimum, the most current version of the industry standards for non-nuclear interconnection provider facilities. A utility grade relay is one that conforms to all of the following IEEE Standards: C37.90, C37.90.1, C37.90.2 and C37.90.3.

Verification Test - a test performed upon initial installation and repeated periodically to determine that there is continued acceptable performance. MidAmerican suggests the Commission consider two types of tests. The first test is a commissioning test which validates that the entire installation functions as designed. This test is performed once upon the initial parallel operation of the generation and is witnessed by utility personnel. The second type of test is a maintenance test, which is performed on a periodic schedule by the facility owner. This maintenance test insures that the installation is continuing to operate correctly and will not be witnessed by the utility unless there is an issue that is being investigated. The results of the tests shall be recorded and kept in a file available to the utility upon request.

Violation – a condition on a high voltage transmission or power distribution system that is considered unacceptable.

Section XXX.020 Purpose

The purpose of this Code Part is to state the terms and conditions that govern the interconnection and parallel operation of distributed generation equipment in order to give all Illinois electric customers the ability to utilize distributed generation equipment, to provide cost savings and reliability benefits to customers, to establish technical requirements that will promote the safe and reliable parallel operation of distributed generation equipment, to enhance both the reliability of electric service and economic efficiency in the production and consumption of electricity, and to facilitate the use of distributed generation equipment in order to provide electric system benefits during periods of capacity constraints.

Section XXX.030 Applicability

a) All interconnection providers are required to adhere to the provisions in Code Part XXX. The interconnection procedures in Code Part XXX are available to interconnection customer's proposing to interconnect distributed generation equipment to the interconnection provider's electric distribution system or high voltage transmission system.

b) Terms used herein shall have the meanings specified in Section XXX.010 Definitions.

c) Neither these procedures nor the requirements included hereunder apply to distributed generation equipment interconnected or approved for interconnection with electric power transmission or distribution systems prior to 60 business days after the effective date of these procedures.

Section XXX.040 Interconnection Agreement

a) The interconnection provider shall issue an interconnection agreement to the interconnection customer if:

1) The interconnection customer submits a completed application to the interconnection customer in accordance with Section XXX.050; and

2) the interconnection customer's proposed distributed generation equipment meets the specifications in IEEE 1547-2003 and all other applicable codes and standards, and the Interconnection customer passes the primary screening criteria in Section XXX.070 and/or secondary screening criteria in XXX.080; or

3) after undergoing a feasibility/impact study under Section XXX.110 and, if necessary, a facilities study under Section XXX.120 and the interconnection provider determines that the small resource may be interconnected safely and reliably with modifications to the interconnection provider's electric transmission and/or distribution system(s), modifications to the interconnection provider's facilities and/or modifications to the interconnection customer's facilities or no modifications whatsoever.

Section XXX.050 Application for Interconnection

a) To assist an interconnection customer in the interconnection process and in accordance with Section XXX.140, the interconnection provider shall designate an employee or office from which information on the application process and on the affected system of an interconnection provider can be obtained through informal requests from the interconnection customer presenting a proposed project for a specific site. System information provided to interconnection customers should include relevant system studies, interconnection studies, and other materials useful to an understanding of an interconnection at a particular point on the system. The interconnection provider shall comply with requests for such information.

b) The interconnection customer shall submit an application to the interconnection provider in the form in Appendix B - "Short Form Application for

Single Phase Attachment of Parallel Generation Equipment 20 kVA or Smaller to the Electric System" or the form in Appendix C - "Standard application for Attachment of Parallel Generation Equipment to the Electric System" for single phase equipment larger than 20 kVA or for three-phase equipment of any size. Applications shall be date-and time-stamped upon receipt. The original date-and time-stamp applied to the application at the time of its original submission for interconnection shall be accepted as the qualifying date-and time-stamp for the purposes of any timetable in this Code Part. The interconnection provider shall provide a notification of receipt to the interconnection customer within 15 business days of receiving the interconnection customer's application. **[MidAmerican comment: MidAmerican does not believe it is reasonable to respond to a request within 3 business days. MidAmerican believes 15 days to be a more reasonable requirement.]** The interconnection provider will notify the interconnection customer within 30 business days of the receipt of the application whether the application is complete or incomplete. **[MidAmerican comment: MidAmerican does not believe it is reasonable to respond to review each interconnection application within 10 business days. MidAmerican believes 30 days to be a more reasonable requirement.]**

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c) If the application is incomplete, the interconnection provider will provide along with the notice that the application is incomplete, a list detailing all information that must be provided to complete the application. The interconnection customer will have 30 days **[MidAmerican comment: MidAmerican does not believe it is reasonable for the customer to need to respond within 10 business days. MidAmerican believes 30 days to be a more reasonable requirement.]** after receipt of the notice to submit the listed information or to request an extension of time to provide such information. If the interconnection customer does not provide the listed information or a request for an extension of time within the 30 day deadline, the application will be deemed withdrawn. An application will be complete upon submission of the listed information to the interconnection provider.

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d) Certain applications may require minor modifications while being reviewed by the interconnection provider. Such minor modifications to a pending application shall not require the filing of a new application. Any modification to machine data or equipment configuration or to the interconnection site of the small resource not agreed to in writing by the interconnection provider and the interconnection customer may be deemed a withdrawal of the application and may require submission of a new application. However, when it is mutually agreed that machine data or equipment configuration modifications will have no significant effect on the small resource interconnection, the interconnection provider will not require the interconnection customer to submit a new application.

e) The interconnection provider shall treat the application and any communications concerning the nature of proposed small resource interconnection confidentially. The interconnection provider shall not use such knowledge of proposed small resource projects submitted to it for interconnection or study to prepare competing proposals to the interconnection customer that offer either discounted rates in return for not installing the distributed generation, to offer competing proposals to install distributed generation equipment, or for any purpose other than facilitating the application and interconnection processes. The interconnection provider is prohibited from sharing any information about proposed small resource interconnections with its affiliates.

f) The interconnection provider shall process all applications in a non-discriminatory manner. Applications will be processed in the order that they are received.

g) Documentation of site control must be submitted for small resource additions with the complete application. Site control may be demonstrated through:

1) ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing a small resource facility;

2) an option to purchase or acquire a leasehold site for such purpose; or

3) an exclusivity or other business relationship between small resource facility and the entity having the right to sell, lease or grant the small resource facility the right to possess or occupy a site for such purpose.

Section XXX.060 Initial Review

Within 45 days after interconnection provider notifies interconnection customer it has received a complete application the interconnection provider shall perform an initial review using the primary and secondary screening criteria set forth in Section XXX.070 and Section XXX.080 respectively, shall notify interconnection customer of the results in accordance with Section XXX.090 and include with the notification copies of the analysis and data underlying the interconnection provider's determinations under the screens. **[MidAmerican comment: MidAmerican does not believe it is reasonable to perform each initial review using the screening criteria within 15 business days. MidAmerican believes 45 days is a more reasonable requirement.]** Interconnection providers shall file tariffs that include rates for the initial review. Such rates shall be differentiated by the nameplate capacity of the generator being interconnected and characteristics of the circuit at the proposed point of interconnection.

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Section XXX.070 Primary Screening Criteria

The primary screens required in this section include the following:

a) For interconnection of a proposed small resource to a radial distribution circuit, the aggregated generation, including the proposed small resource, on the circuit will not exceed 20% of the circuit annual minimum load as most recently measured at the substation. **[MidAmerican comment: MidAmerican believes it is more appropriate to set limits based on the minimum load on a circuit. Islanding is the greatest concern and islanding is most likely if the generation is above 20% of the minimum load on a circuit.]**

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b) For interconnection of a proposed small resource to the load side of spot network protectors, the proposed small resource must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, will not exceed the smaller of 5% of a spot network's maximum load or 50 kW. **[MidAmerican is concerned about this provision. MidAmerican believes there are significant issues associated with connecting DG to the load side of network protectors because MidAmerican does not believe that secondary network protectors are rated or tested for this application]**

c) The proposed small resource cannot be connected on the load side of a secondary network protector, except as allowed under (b) above for a spot network. **[MidAmerican Comment: See comment under item (b) above]**

d) The proposed small resource, in aggregation with other generation on the distribution circuit, will not contribute more than l0% to the distribution circuit's maximum short circuit current at the point on the high voltage (primary) level nearest the proposed point of common coupling.

e) The proposed small resource, in aggregate with other generation on the distribution circuit, will not cause any distribution protective devices and equipment (including but not limited to substation breakers, fuse cutouts, and line reclosers), or interconnection customer distributed generation equipment on the system to exceed 85% of the short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds 85% of the short circuit interrupting capability.

f) The proposed small resource, in aggregate with other generation interconnected to the distribution low voltage side of the substation transformer feeding the distribution circuit where the interconnection customer proposes to interconnect the small resource, will not exceed 10

MW in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity (e.g., 3 or 4 transmission voltage level busses from the point of interconnection). **[MidAmerican believes that the Mid-Continent Area Power Pool ("MAPP") criteria should apply with regard to stability issues. MidAmerican will supply that criteria as part of the workshop process.]**

g) For interconnection of a proposed single-phase small resource where the primary distribution system is three-phase, four-wire, the small resource will be connected line-to-neutral. For interconnection of a proposed single-phase small resource where the primary distribution system is three-phase, three-wire, the small resource will be connected line-to-line. The aggregate single-phase generation connected to any one phase (A,B, or C) should not exceed the greater of 10% of the minimum feeder load or 167 kVA. **[MidAmerican comment: This additional requirement is needed to maintain electric system phase balancing within acceptable limits. Unbalanced feeder or high voltage distribution line operation can lead to neutral current flows, relay misoperations, and reduced reliability.]**

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h) For interconnection of a proposed three-phase small resource to a three-phase four-wire distribution circuit or a distribution circuit having mixed three-wire and four-wire sections, the aggregate generation capacity including the proposed small resource will not exceed 10% of line section peak load.

i) If the proposed small resource is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed small resource, will not exceed 20 kVA.

j) If the proposed small resource is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition will not create an imbalance between the two sides of the 240 volt service of more than 20% of nameplate rating of the service transformer.

k) The proposed small resource's point of common coupling will not be on a transmission line.

Section XXX.080 Secondary Screening Criteria

The secondary screens include the following:

a) For interconnection of a proposed small resource to a radial distribution circuit, the new small resource's capacity in aggregate with other

generation on the circuit will not exceed 15% of total circuit peak load as most recently measured at the substation; nor will it exceed 15% of a distribution circuit line section annual peak load. A line section is defined as that section of the low-voltage radial distribution system between two sectionalizing devices in the area electric power system, as defined in national industry standards. **[MidAmerican Comment: MidAmerican believes that the additional words above are needed because MidAmerican has filed with FERC a delineation of transmission versus high-voltage distribution facilities and thus the word "distribution" must be clarified in MidAmerican's case.]**

b) For interconnection of a proposed small resource to the load side of spot network protectors, the proposed small resource must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, will not exceed the smaller of 5% of a spot network's maximum load or 50 kW and must comply with all requirements of approved industry standards for interconnection technical specifications and requirements. **[MidAmerican is concerned about this provision. MidAmerican believes there are significant issues associated with connecting DG to the load side of network protectors because MidAmerican does not believe that secondary network protectors are rated or tested for this application]**

c) For the interconnection of a proposed small resource to any network, the small resource must utilize a protective scheme that will ensure that its current flow will not affect the network protective devices including reverse power relays or a comparable function. Synchronous small resources cannot be interconnected to a secondary network. **[MidAmerican Comment: See comment under item (b) above]**

d) For interconnection of a proposed small resource that is an induction generator or that utilizes inverter-based protective functions, both of which include reverse power relay functions, the small resource's total net generating capacity, in aggregate with other small resources interconnected on the load side of network protective devices, does not exceed the lesser of 10% of the minimum load on the network or 50 kW. A small resource does not export to any network. **[MidAmerican Comment: See comment under item (b) above]**

e) The proposed small resource, in aggregation with other generation on the distribution circuit, will not contribute more than 10% to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of common coupling.

f) The proposed small resource *in aggregate* with other generation on the distribution circuit will not cause any distribution equipment, protective devices (including but not limited to substation breakers, fuse cutouts, and line reclosers), or interconnection customer equipment on the system to exceed 90% of their short circuit interrupting capability; nor is the

interconnection proposed for a circuit that already exceeds the 90% short circuit interrupting capability limit.

g) The proposed small resource's point of common coupling will not be on a transmission line.

Section XXX.090 Results of Initial Review

a) If the initial review determines that the proposed interconnection passes the primary screening criteria, then the interconnection application will be approved and the interconnection provider will provide interconnection customer an executable interconnection agreement within 5 business days after the determination.

b) If the initial review determines that the proposed interconnection passes the secondary screening criteria and fails the primary screening criteria, but the interconnection provider determines through the initial review that the small resource may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the interconnection provider will provide the interconnection customer an executable interconnection agreement within 5 business days after the determination.

c) If the initial review determines that the proposed interconnection fails both the primary screening criteria and the secondary screening criteria, but the interconnection provider determines through the initial review that the small resource may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the interconnection provider will provide interconnection customer an executable interconnection agreement within 5 business days after the determination.

d) If the initial review determines that the proposed interconnection fails the primary screening criteria and passes the secondary screening criteria, but the interconnection provider determines from the initial review that the small resource cannot be interconnected consistent with safety, reliability, and power quality standards unless the interconnection customer is willing to consider modifications to the small resource, the interconnection provider will describe, in writing or through electronic mail within 10 business days after the determination, small resource modifications necessary for the interconnection customer to interconnect with the interconnection provider's system. Such recommendations shall include copies of data and analyses underlying the interconnection provider's determination of the need for small resource modifications and a detailed explanation of the modifications.

The interconnection provider shall forward an executable interconnection agreement to interconnection customer within 10 business days after

confirmation that the interconnection customer has agreed to make the necessary changes to the small resource at the interconnection customer's cost.

e) If the initial review determines that the proposed interconnection fails the primary screening criteria and passes the secondary screening criteria, but the interconnection provider determines from the initial review that the small resource cannot be interconnected consistent with safety, reliability, and power quality standards unless the interconnection customer is willing to consider modifications to the interconnection provider's system or facilities, the interconnection provider will recommend, in writing or through electronic mail within 10 business days of the determination, system or facility modifications necessary for the interconnection customer to interconnect with the interconnection provider's system. Such recommendations shall include copies of data and analyses underlying the interconnection provider's determination of the need for system or facilities modifications, a detailed explanation of the necessary system or facility modifications, an estimated time for the completion of the system or facility modifications and a cost estimate with a binding maximum value to complete the system or facility modifications. Within 30 business days, the interconnection customer must issue payment to the interconnection provider for the system or facility modifications in order to be considered for interconnection. When the actual cost of the necessary facility or system modifications is below the binding maximum cost estimate, the interconnection provider shall refund the difference to the interconnection customer without interest.

The interconnection provider shall forward an executable interconnection agreement to interconnection customer within 10 business days after confirmation that the interconnection customer has agreed to pay for the necessary system or facility modifications to the interconnection provider's system.

f) If the initial review determines that the proposed interconnection fails both the primary and the secondary screening criteria and the interconnection provider determines from the initial review that the small resource cannot be interconnected consistent with safety, reliability, and power quality standards, then the proposed interconnection will be addressed under Section XXX.XXX – Scoping Meeting.

Section XXX.100 Scoping Meeting

The scoping meeting described herein is available to an interconnection customer whose application for interconnection to the interconnection provider's system fails both the primary and secondary screening criteria and the interconnection provider has

determined that the distributed generation equipment cannot be interconnected without further studies.

a) At the request of either party, a scoping meeting will be held within 30 business days, or as otherwise mutually agreed to by the parties, after the interconnection provider notifies the interconnection customer that the application fails both the primary and secondary screening criteria. The interconnection provider and interconnection customer will bring to the meeting personnel, including system engineers, and other resources as may be reasonably required to accomplish the purpose of the meeting.

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b) The purpose of the scoping meeting shall be to discuss the interconnection customer's interconnection request, and review existing studies relevant to the interconnection customer's interconnection request. The parties shall further discuss whether the interconnection provider should perform a feasibility/impact study in accordance with Section XXX.110. If the parties agree that a feasibility/impact study should be performed, the interconnection provider will provide interconnection customer, no later than 10 business days after the scoping meeting, a feasibility/impact study agreement including an outline of the scope of the study and a cost estimate with a binding maximum value to perform the study. **[MidAmerican Comment: MidAmerican believes that 10 business days is more reasonable]**

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c) The scoping meeting may be omitted by mutual agreement. In order to remain in consideration for interconnection, the Interconnection customer requesting a feasibility/impact study must return the executed feasibility/impact study agreement within 30 , days in accordance with Section XXX.110. **[MidAmerican believes that 30 days is more reasonable.]**

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Section XXX.110 Feasibility/Impact Study

The purpose of the feasibility/impact study is to identify the effect(s) of interconnecting the small resource to the high voltage transmission or electric distribution system, including identification of potential violations, the effect the interconnection would have on system reliability, and to assist in the determination of a maximum binding cost estimate of any facility modifications required for interconnection.

a) A deposit of fifty percent of the interconnection provider's binding maximum cost estimate of the feasibility/impact study costs may be required from the interconnection customer within 15 business days from the receipt of the feasibility/impact study agreement. Any study fees will include a summary of professional time. An Interconnection customer must pay the remainder of the study fees that exceed the deposit within 20

business days of receipt of the invoice or resolution of any dispute but shall pay no more than the interconnection provider's binding maximum cost estimate. If the deposit exceeds the invoiced fees, the interconnection provider will refund the excess amount within 20 business days of the invoice without interest. In performing the feasibility/impact study, the interconnection provider shall rely, to extent reasonably practicable, on existing studies of recent vintage. The interconnection customer will not be charged for such existing studies; however, the interconnection customer will be responsible for charges associated with any new study or modifications to existing studies that are reasonably necessary to perform the feasibility/impact study except for amounts that exceed the binding maximum value of the interconnection provider's cost estimate.

b) The feasibility/impact study shall include the following analyses:

1) Short circuit analysis: including identification of any equipment short circuit capability limits exceeded as a result of the interconnection,

2) Power flow analysis: including identification of any potential thermal overload or voltage limit violations resulting from the interconnection,

3) Voltage drop and flicker analysis: Including an examination of the expected magnitude and frequency of occurrence,

4) Protection analysis: Including coordination studies and identification of necessary changes in equipment, coordination set points, and/or grounding requirements as a result of the interconnection, and

5) Cost estimate with a binding maximum value for any system or facility modifications and a time estimate for completion of such modifications including: a description of all facility and/or system modifications required to interconnect the small resource to an electric distribution power system or directly to a high voltage transmission system. The provider may also suggest modification(s) to the interconnection customer's proposed facilities if such modifications would help to address potential violations. The estimate shall itemize costs to address all potential violations that are a direct result of the interconnection, including short circuit, power flow, voltage, and protection issues.

c) The feasibility/impact study will consider all generating facilities that, when the feasibility/impact study is performed:

1) Are directly interconnected to the high voltage transmission system and/or electric power distribution system; or

2) Are interconnected to affected systems and may have an impact on the interconnection request; and

3) Have a pending higher queued interconnection request to interconnect to the high voltage transmission and/or the electric power distribution system.

A feasibility/impact study shall consider interconnection of the small resource regardless of its initial indicated purpose in order to avoid the further expense and interruption of operation for reexamination should the interconnection customer later change the purpose. **[MidAmerican comment: MidAmerican believes that the study should only examine the customer's stated intended use of the facility. This is necessary because certain technical requirements will apply depending upon the intended use. For example, customers who wish only to curtail their own load and agree to have a reverse power relay to insure that they do not export to the utility, will require a certain amount of system protection and communications facilities. A customer whose intended use is to export the energy will require additional protective facilities. It is unnecessary and wasteful to determine the requirements for both types of installations.]**

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e) If so requested by the interconnection customer, a feasibility/impact study will consider multiple potential points of interconnection at a proposed project site, at the interconnection customer's cost.

f) Within 60 business days from the date an authorized feasibility/impact study agreement and deposit are received from the interconnection customer, the interconnection provider shall transmit a feasibility/impact study report to the interconnection customer that details the results of the feasibility/impact study. **[MidAmerican believes 60 business days is more reasonable.]**

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1) In instances where the feasibility/impact study shows no potential for high voltage transmission system or electric power distribution system violations, the interconnection provider will immediately send the interconnection customer either a facilities study agreement, including an outline of the scope of the study and a cost estimate with a binding maximum value to perform the study, or an interconnection agreement in the event that no facilities study is required for interconnection.

2) In instances where a feasibility/impact study shows potential for high voltage transmission system or electric power distribution system violations, and the affected systems are operated by the interconnection provider, the required remedial action(s) and the estimated binding maximum cost of taking such remedial action(s), including an assignment of costs responsibilities, shall be included in the feasibility/impact study report. If necessary, the interconnection provider will send the interconnection customer a facilities study agreement in accordance with Section XXX.120.

3) In instances where the small resource is to be connected to the interconnection provider's distribution system, but the feasibility/impact study shows potential for high voltage transmission system violations and the interconnection provider does not operate the high voltage transmission system:

i) Within 5 business days following transmittal of the feasibility/impact study report, the interconnection provider shall notify the appropriate high voltage transmission service provider in accordance with any interconnection notification protocols as provided for in the high voltage transmission provider's Open Access Transmission Tariff on file with the FERC.

ii) Within 5 business days the interconnection provider shall send the interconnection customer a transmission impact study agreement, including an outline of the scope of the study and a binding maximum estimate of the cost to perform the study. In order to remain under consideration for interconnection, the interconnection customer must return an executed transmission impact study agreement and a deposit of the equivalent of half the estimated cost of the impact study within 30 business days. Interconnection customers must pay any study costs that exceed the deposit within 20 business days of receipt of the invoice or resolution of any dispute up to the binding maximum cost estimate. If the deposit exceeds the invoiced costs, interconnection provider will return such excess within 20 business days of the invoice without interest.

In cases where the utility system being interconnected to is not the same as the entity owning/operating the transmission system connecting to the distribution system, the interconnection customer shall coordinate the transmission impact study, and shall attempt to convey results to the Interconnection customer within 60 business days of the receipt of the authorized transmission impact study agreement and deposit.

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[MidAmerican believes the above changes are necessary because MidAmerican owns/operates both the distribution system and the transmission system in its territory in Illinois.]

iv) Within 30 days of receipt of the results of the transmission impact study, the interconnection customer must notify the interconnection provider of its intention to proceed. If the interconnection customer chooses to proceed, the interconnection provider will send the interconnection customer a facilities study agreement in accordance with Section XXX.120.

4) Where high voltage transmission systems and electric power distribution systems have separate owners, such as is the case with transmission-dependent utilities ("TDUs")--whether investor-owned or not, the interconnection customers may apply to the nearest high voltage transmission provider (Transmission Owner, Regional Transmission Operator, Independent Transmission interconnection customer, or Independent Transmission Provider) providing transmission service to the TDU to request project coordination if that high voltage transmission provider is notified in accordance with interconnection notification protocols as provided for in the high voltage transmission provider's open access transmission tariff on file with the FERC. In such cases, the interconnection provider shall be provided a copy of the transmission impact study report, but shall not be responsible to coordinate the transmission impact study.

1) Within 30 days of receipt of the results of the transmission impact study, the interconnection customer must notify the interconnection provider of its intention to proceed. If the interconnection customer chooses to proceed, the interconnection provider will send the interconnection customer a facilities study agreement in accordance with Section XXX.120.

Section XXX.120 Facilities Study

The purpose of the facilities study is to determine specific modifications to the high voltage transmission or electric distribution system(s) necessary to interconnect the small resource, and to determine, with accuracy, the cost of those modifications. The interconnection provider may also suggest optional modifications to the interconnection customer's proposed distributed generation equipment if the interconnection provider believes such modifications would reduce interconnection costs or provide other benefits.

A facilities study agreement will be transmitted to the interconnection customer with the feasibility/impact study report. The facilities study agreement shall include an outline of the scope of the study and a cost estimate to perform the facilities study. **[MidAmerican comment: The actual and reasonably incurred costs should be billed to the customer]**When the actual cost of the facilities study is below the cost estimate, the interconnection provider shall refund the difference to the interconnection customer without interest. In order to remain under consideration for interconnection, the interconnection customer must return the executed facilities study agreement or a request for an extension of time within 30 business days. The interconnection provider may require a deposit of the equivalent of 50% of the maximum binding estimated cost of the facilities study when the interconnection customer returns the executed facilities study agreement. If the interconnection provider determines that no high voltage transmission system or electric power distribution system interconnection facilities are required, the facilities study will not be required and the project will proceed directly to the execution of an interconnection agreement.

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a) High voltage transmission system and/or electric power distribution system interconnection design for any required interconnection facilities and/or system modifications will be performed under a facilities study agreement between the interconnection customer and the interconnection provider. The interconnection provider may contract with consultants, including contractors acting on behalf of the high voltage transmission service provider or the electric power distribution service provider, as appropriate, to perform the bulk of the activities required under the facilities study agreement. In some cases, the interconnection customer and the interconnection provider may reach agreement allowing the interconnection customer to separately arrange for the design of some of the required high voltage transmission or electric power distribution interconnection facilities. In such cases, facility design will be reviewed and/or modified prior to acceptance by the interconnection provider, under the provisions of the facilities study agreement. If the parties agree to separately arrange for design and construction, interconnection providers shall make sufficient information available to the interconnection customer to permit the interconnection customer to obtain an independent design and cost estimate for any necessary facilities.

b) Whether system upgrades are required or the required facilities are limited to interconnection facilities, the facilities study must be completed within 60 business days of the receipt of the facilities study agreement. **[MidAmerican Comment: MidAmerican believes that 60 business days is more reasonable to complete the study.]**

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c) Where system modifications or additional interconnection facilities are required to permit the interconnection of a small resource, the interconnection customer will bear the cost of such system upgrades or

interconnection facilities as determined by the facilities study and at no more than the estimated binding maximum cost provided for in the facilities study agreement. The interconnection customer may be credited for the cost of system or facility modifications or such costs may be offset by mutual agreement with subsequent interconnection customers, or by other laws, rules, tariffs, or billing experiments.

d) An interconnection provider may propose to group facilities required for more than one interconnection customer addition in order to minimize facilities costs through economies of scale, but any interconnection customer may require the installation of facilities required for its own system if it is willing to pay the costs of those facilities.

Section XXX.130 Compliance

No later than 30 days after the effective date of this Code Part as amended, each interconnection provider shall file a tariff or tariffs for interconnection and parallel operation of distributed generation equipment in conformance with the provisions of this Code Part. The utility may file a new tariff or a modification of an existing tariff. Any modifications of existing tariffs or offerings of new tariffs relating to this subsection shall be consistent with this Code Part. Concurrent with the tariff filing in this section, each utility shall submit:

a) an initial review fee schedule and all supporting cost data for the fees;

b) an interconnection agreement in form of the agreement attached as Appendix A; and

c) standard applications for interconnection and parallel operation of distributed generation in the form of the attached applications in Appendices B and C.

Section XXX.140 Designation of Interconnection Provider Contact Persons

a) Each interconnection provider shall designate a person or persons who will serve as the interconnection provider's contact for all matters related to distributed generation interconnection.

b) Each interconnection provider shall identify to the Commission’s Director of the Consumer Services Division and the Director of the Energy Division its distributed generation contact person.

c) Each interconnection provider shall provide convenient access through its internet web site to the names, telephone numbers, mailing addresses and electronic mail addresses for its distributed generation contact person.

Section XXX.150 All Reasonable Efforts

The interconnection provider shall make all reasonable efforts to meet all time frames provided in these procedures unless the interconnection provider and the interconnection customer agree to a different schedule. The interconnection provider shall make all reasonable efforts to complete system upgrades on or before the estimated deadline for completion. If an interconnection provider cannot meet a deadline provided herein including deadlines provided in agreements, it shall notify the interconnection customer in writing no later than three business days after the deadline has passed. The notification shall explain the reason for the failure to meet the deadline and provide an estimated time by which it will complete the applicable interconnection procedure. The interconnection provider shall also include the notification as well as any other relevant materials in an informational filing with the Commission no later than seven business days after notification is provided to the interconnection customer. Such filing shall be filed with the Chief Clerk's Office and copies shall be sent to the Director of the Consumer Services Division and the Director of the Energy Division.

Section XXX.160 Metering

Any metering necessitated by the use of the small resource shall be installed in accordance with state regulatory requirements.

Section XXX.170 Installation and Commissioning

a) Upon execution of an interconnection agreement, the interconnection customer shall provide the interconnection provider with an estimate of the date on which installation of the distributed generation equipment shall be completed. The estimated date shall be no later than the latter of 18 months following the date that the interconnection agreement was executed or 18 months following the date that system or facility modifications were completed by the interconnection provider. Installation of the interconnection customer's distributed generation equipment shall be completed as specified in the standardized application and any studies indicating a need to modify the interconnection customer's distributed generation equipment. The interconnection customer shall inform the interconnection provider in writing when the installation of the distributed generation equipment is complete. If the customer fails to install and inform the interconnection provider of the installation within the latter of 18 months following the date that the interconnection agreement was executed or 18 months following the date that system or facility modifications were completed by the interconnection provider, the

interconnection customer must reapply for interconnection before interconnection can take place unless an extension on the deadline to interconnect is mutually agreed to between the interconnection customer and the interconnection provider.

b) Commissioning tests of an interconnection customer's installed distributed generation equipment shall be performed pursuant to applicable codes and standards. The interconnection provider must be given 30 business days written notice, or as otherwise mutually agreed to by the parties, of the tests and shall be present to complete the interconnection, inspect the interconnection customer's distributed generation equipment for compliance with applicable codes and standards, and witness the commissioning tests. **[MidAmerican believes 30 days notice prior to a test is more reasonable.]**

Deleted: 10

c) If the inspection of the interconnection customer's distributed generation equipment does not result in a finding that the distributed generation equipment is in compliance with applicable codes and standards and the executed agreement, the interconnection provider shall provide written notification to the interconnection customer explaining why the generation equipment was not in compliance. Once the interconnection customer has addressed the non-compliance in the notification, the interconnection customer shall provide the interconnection provider with 10 business days notice, unless otherwise mutually agreed to between interconnection customer and interconnection provider, that it is prepared for another inspection.

Section XXX.180 Reporting Requirements

Each interconnection provider shall maintain records concerning applications received for interconnection and parallel operation of distributed generation. Such records will include the date each application is received, documents generated in the course of processing each application, correspondence regarding each application, and the final disposition of each application.

Section XXX.190 Complaint Procedures

Complaints alleging violations of Code Part XXX shall be filed pursuant to 83 Ill. Adm. Code 200.